

## ABSTRACT

A receiving apparatus according to the present invention includes: a provisional determining unit (12) that makes a provisional determination of a transmission  
5 signal based on a reception signal; a metric calculating unit (13) that calculates a metric based on a result of the provisional determination and a reception signal; a lattice-point-range setting/estimate-symbol generating unit  
10 (14) that forms a hypersphere centering around a reception signal point based on a metric obtained as a result of the calculation or an updated metric, and determines whether a candidate of an estimate symbol is present within the hypersphere; and a metric calculating/comparing unit (15)  
15 that calculates a metric based on a candidate of an estimate symbol obtained as a result of the determination and a reception signal, stores a minimum metric in the past and a candidate of an estimate symbol at that time, and updates stored information when a newly calculated metric is minimum.